Ideal Diode Controller with Reverse-Current Protection

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Typical Application

Reverse Current Blocking

$I_{Q\_Charge\ On}$ MAX and MIN

ORDERABLE DEVICE	PACKAGING TYPE	STANDARD PACK QTY	PACKAGE MARKING	PINS	PACKAGE DESCRIPTION

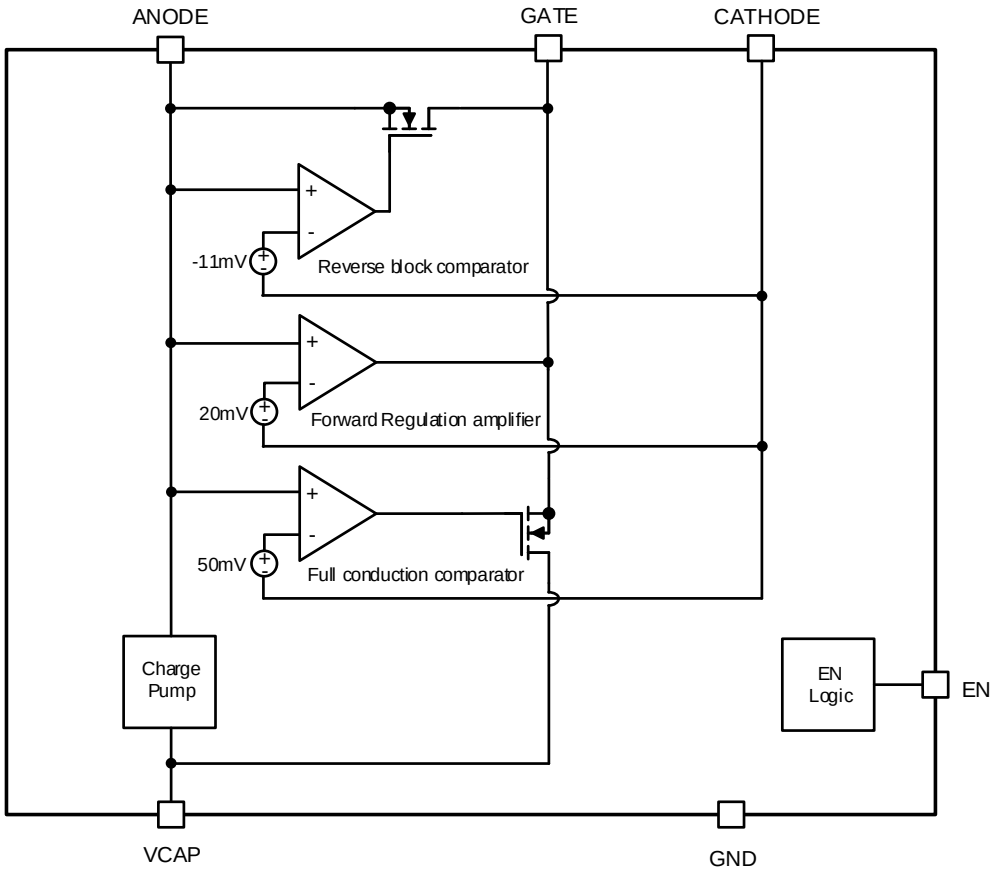
PARAMETER	DEFINITION	MIN	MAX	UNIT

PARAMETER	DEFINITION	MIN	MAX	UNIT

(1)
(2)

PARAMETER	THERMAL METRIC	SOT23-6L	UNIT

SYMBOL	PARAMETER	TEST CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE						
$V_{(ANODE)}$						
$V_{(ANODE\ POR)}$	VANODE POR Rising threshold VANODE POR Falling threshold					
I_{SHDN}		V_{EN}= 0V				
$I_{Q\_Charge\ Off}$						
$I_{Q\_Charge\ On}$						
ENABLE						
V_{EN_H}	Enable input high threshold					
V_{EN_L}	Enable input low threshold					
V_{EN_HYS}	Enable Hysteresis					



Overview

polarity protection circuit or be used in a . This easy to use ideal diode controller operates in conjunction with an external N-channel MOSFET to replace other reverse polarity schemes such as a P-channel MOSFET or a Schottky diode.

Input Voltage

Enable

Charge Pump

Gate Driver and Conduction Mode

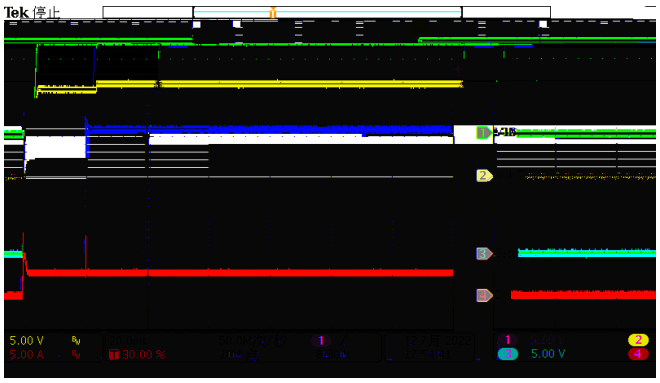
full conduction mode

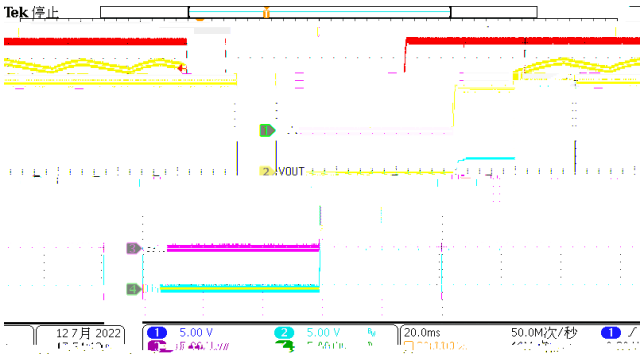
reverse current protection mode

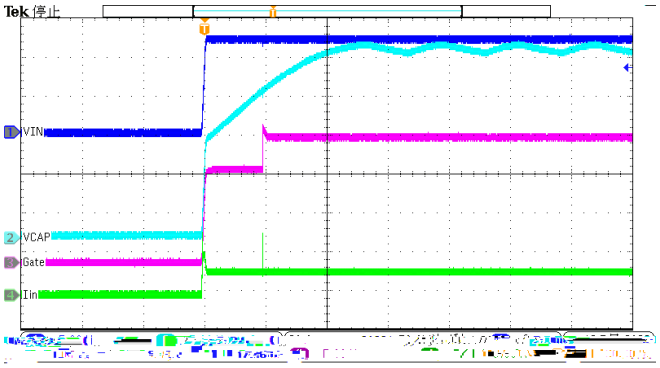
MOSFET Selection

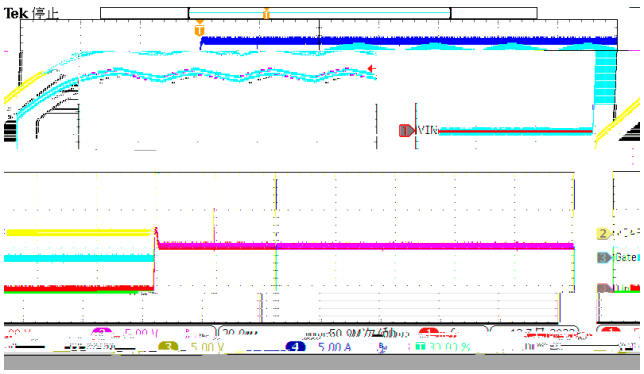
maximum continuous drain current I_D,
maximum source current through body diode,

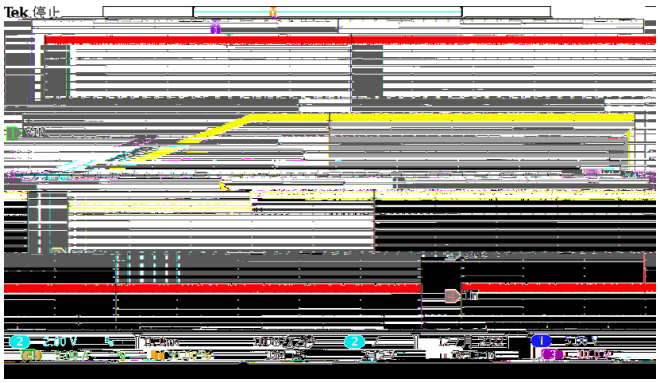
Application Waveforms

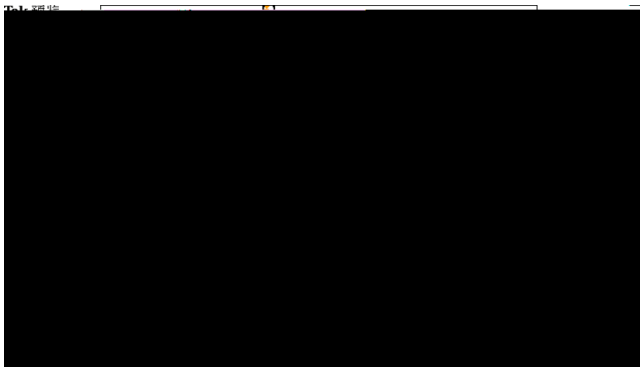




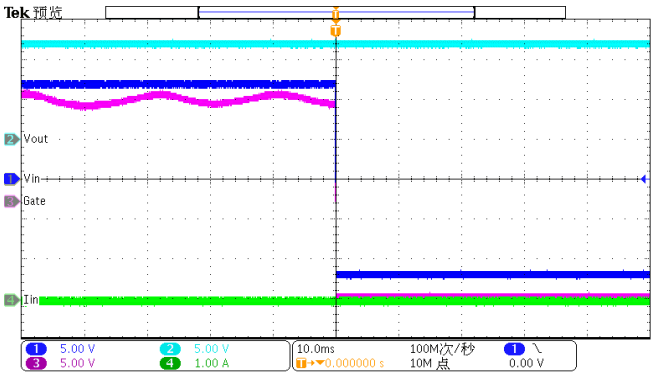


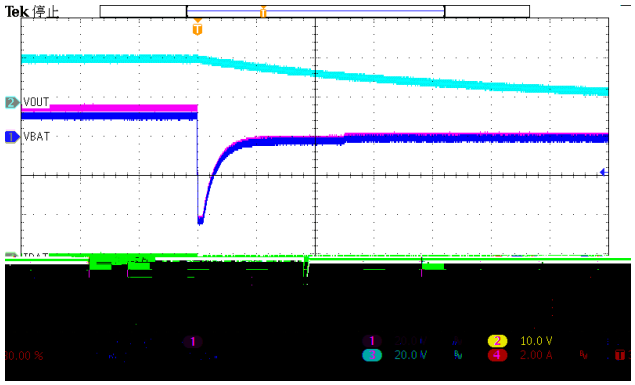


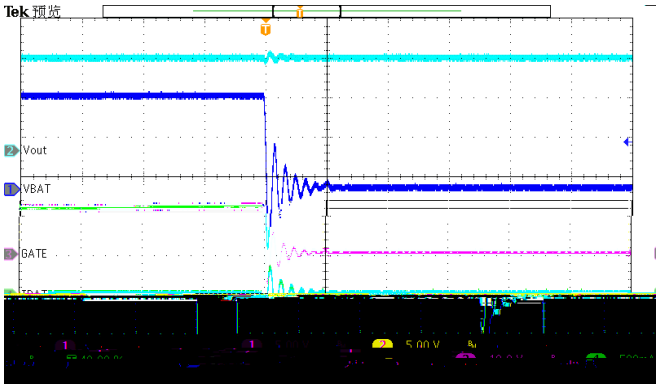


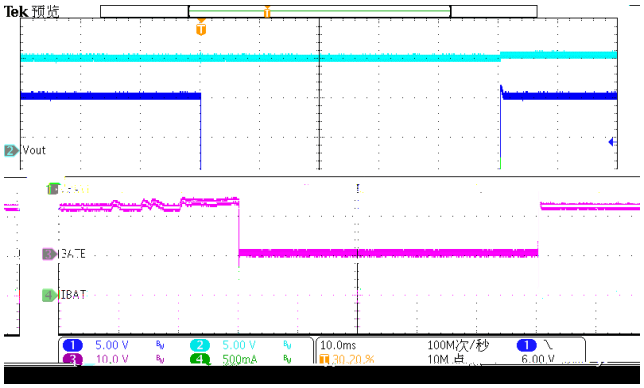


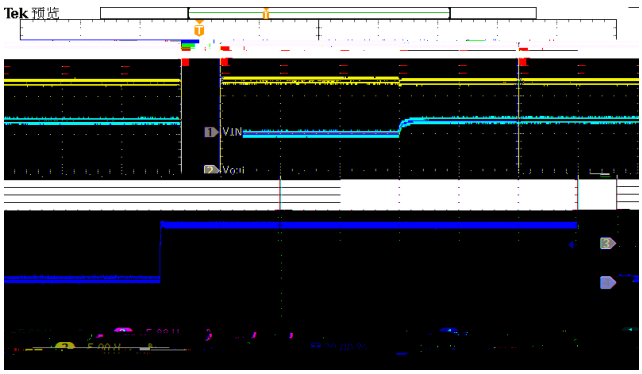
Application Waveforms(continued)

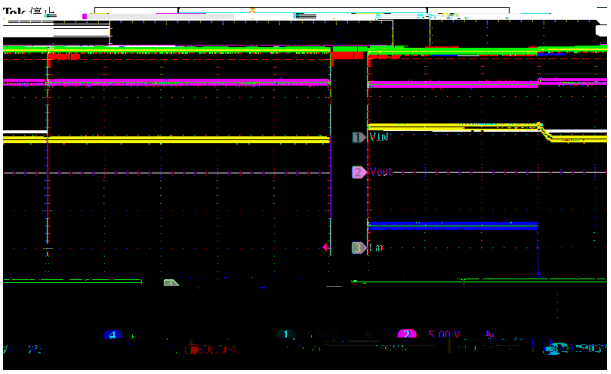












Typical Application- Redundant Power

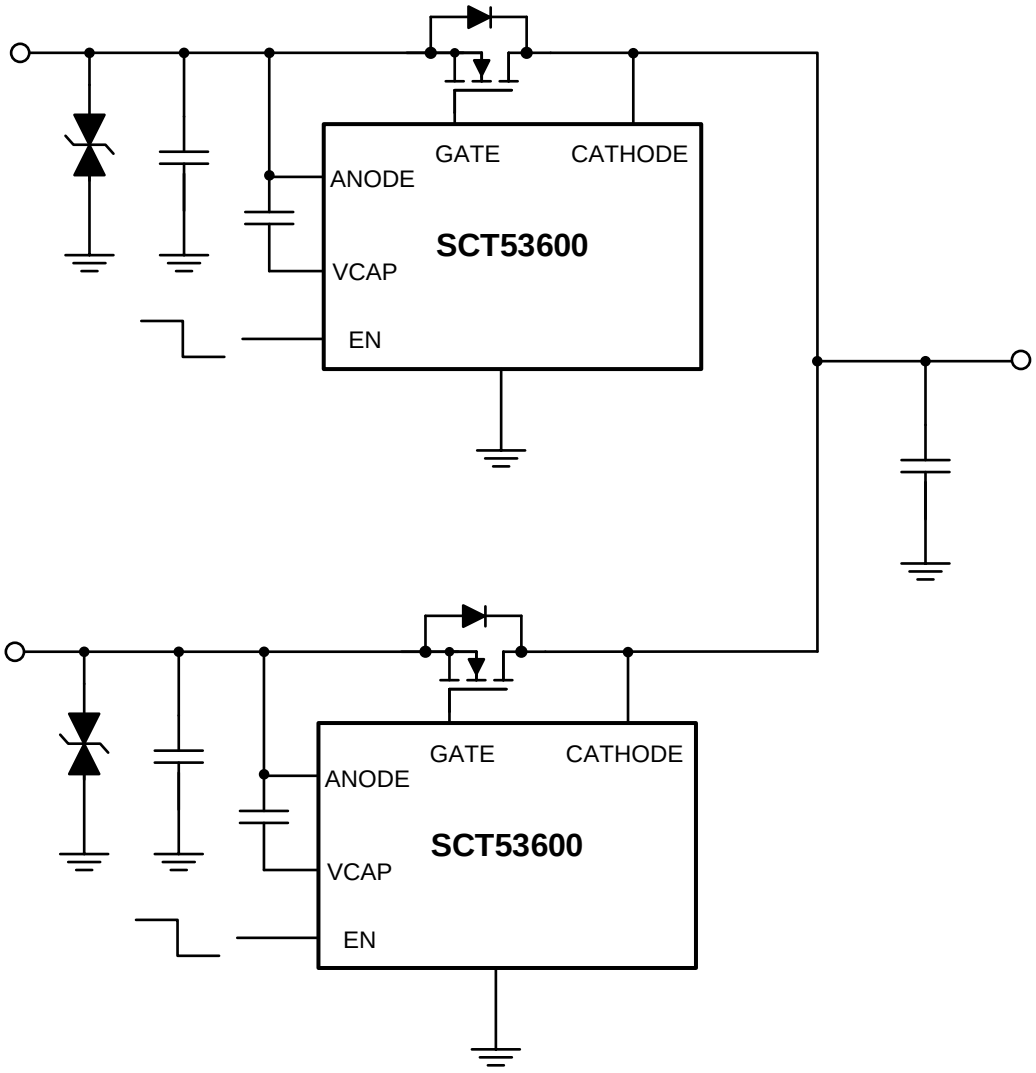
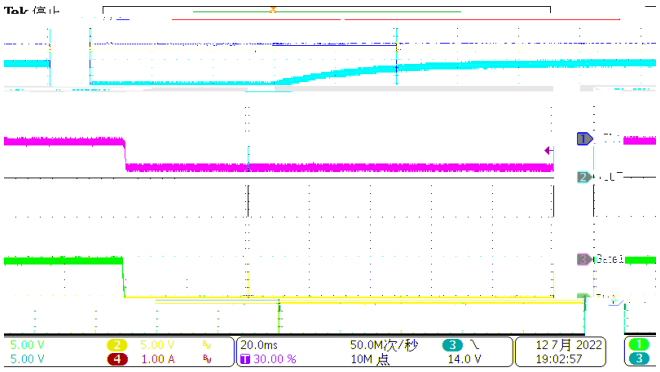
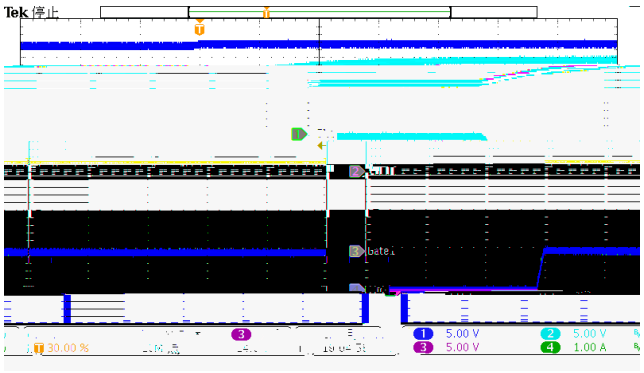
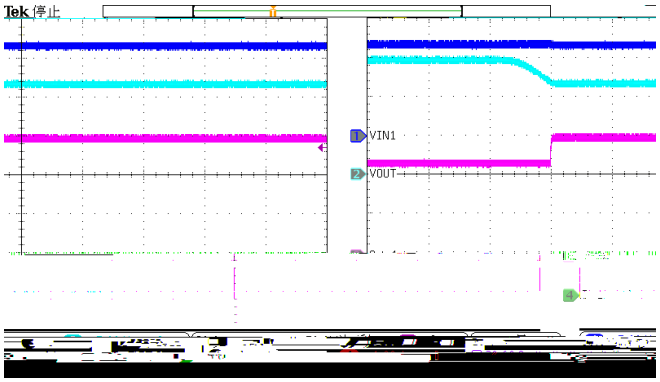


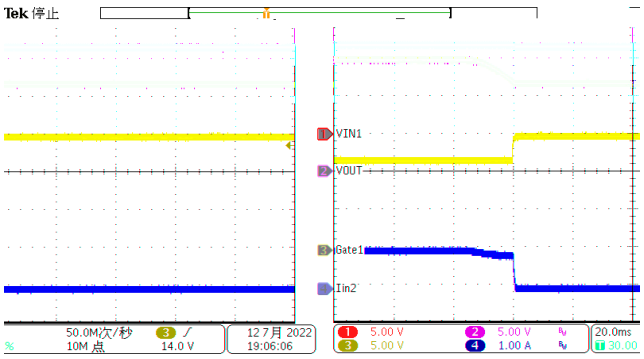
Figure 22. Redundant Power Supply Application

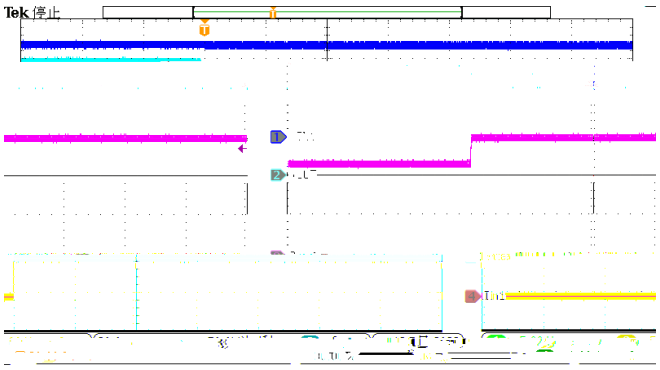
Application Waveforms

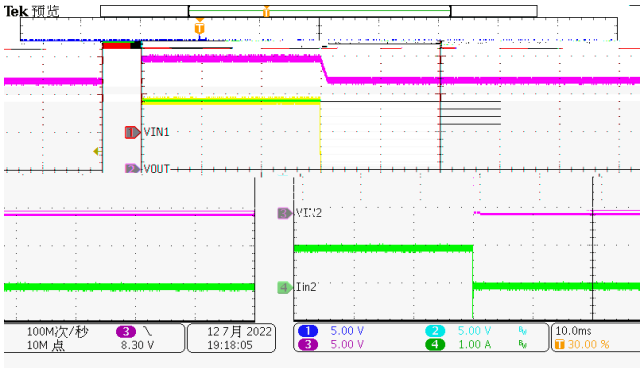


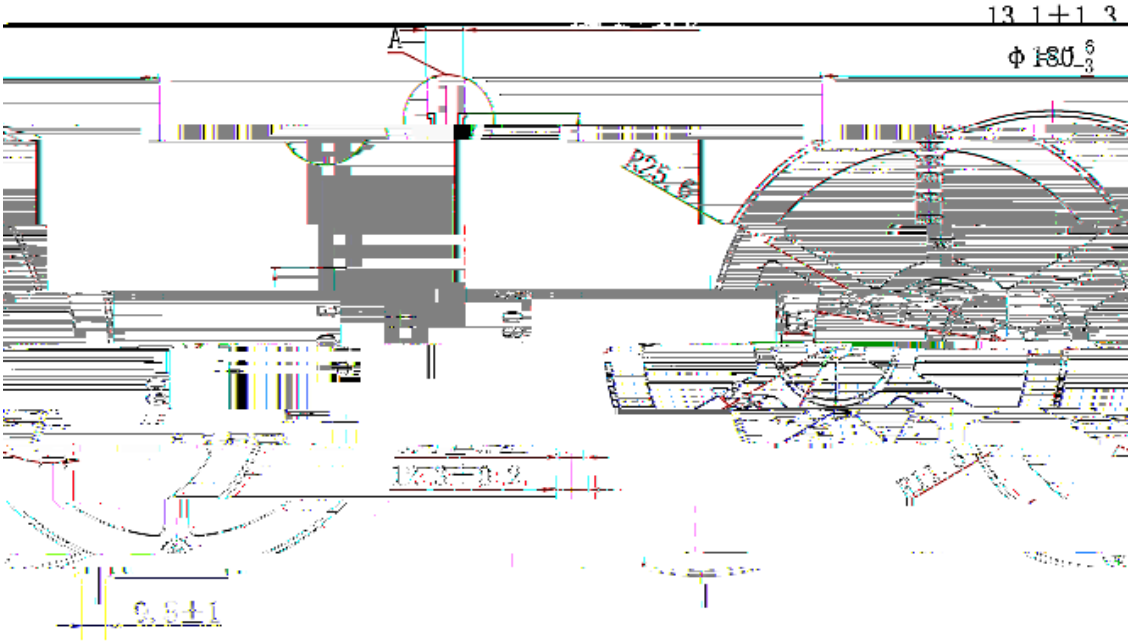


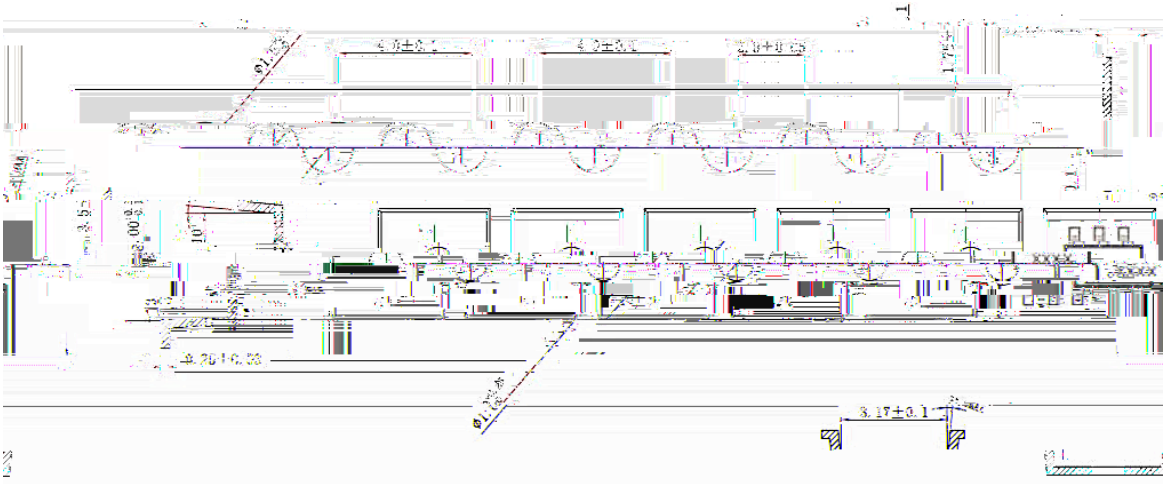












Feeding Direction

